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INTER-OFFICE CORRESPONDENCE  
RICHMOND, VIRGINIA

To: • E. B. Sanders  
From: • R. T. Bass  
Subject: • Plans and Objectives for 1982  
(Project #2506 - R. Bass, G. Newell, and A. Brna)

Date: October 28, 1981

1. To provide  $^{14}\text{C}$  radiolabelled tobacco for investigations into the process by which cigarette smoke is formed and delivered; also to grow tobacco plants with selected isotopes (i.e.  $^{45}\text{Ca}$ ,  $^{32}\text{P}$ ,  $^{35}\text{S}$ ), to cure the harvested leaf, and to fabricate cigarettes for determinations of the fate of these isotopes in smoke. We have produced  $^{45}\text{Ca}$  tobacco which will be utilized to follow the fate of  $^{45}\text{Ca}$  in cigarette combustion.

2. To grow and provide fresh green tobacco plant materials in order to supply various samples as requested by other R&D Projects; also to provide and maintain mature tobacco plants for various display purposes at R&D and at the Manufacturing Center.

3. To continue to investigate the growing and use of *N. rustica* to provide a source of  $^{14}\text{C}$  labelled minor alkaloids to be used in smoke studies.

4. To blend, cut, spray, and process various tobaccos and fillers as required and to subsequently prepare special hand made cigarettes for smoke studies.

5. To provide and maintain an inventory of  $^{14}\text{C}$  labelled plant materials, and regular tobacco samples of various types and characteristics used in blend and cigarette production.

6.. To provide appropriate responses to various special inquiries and review certain manuscripts as requested by management.

7. To provide liaison with PM R&D, the Leaf Department, Tobacco Industry Committies, commercial companies, Federal and State Agricultural Research Agencies, and growers on a cooperative basis, to test and evaluate any necessary tobaccos or materials deemed to be in the best interest of the company.

8. To continue the production of  $^{14}\text{C}$  tobacco in the Greenhouse chamber growth system specifically for the VDC nicotine work, as related to decomposition of nicotine during cigarette combustion and the subsequent precursor-product relationships.

9. To investigate and update our capabilities as related to the techniques of sheet making procedures used to incorporate

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$^{14}\text{C}$  materials into a usable physical form for cigarette making and subsequent smoke studies (e.g., the fate of  $^{14}\text{C}$  protein during combustion and its possible contribution to the formation of aza-arenes and nitrosamines, etc.).

*Roy T. Bass*

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